



SEQUENCE LISTING

<110> Foster, Donald C.
Xu, Wenfeng
Madden, Karen L.
Kelly, James D.
Sprecher, Cindy A.
Brandt, Cameron S.
Rixon, Mark W.
Presnell, Scott R.
Fox, Brian A.

<120> Soluble Interleukin-20 Receptor

<130> 99-107

<150> 60/171,966
<151> 1999-12-23

<150> 60/213,416
<151> 2000-06-22

<160> 72

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 176
<212> PRT
<213> Homo sapiens

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								20		25				30	
Cys	Val	Ile	Ala	Thr	Asn	Leu	Gln	Glu	Ile	Arg	Asn	Gly	Phe	Ser	Asp
								35		40			45		
Ile	Arg	Gly	Ser	Val	Gln	Ala	Lys	Asp	Gly	Asn	Ile	Asp	Ile	Arg	Ile
				50			55			60					
Leu	Arg	Arg	Thr	Glu	Ser	Leu	Gln	Asp	Thr	Lys	Pro	Ala	Asn	Arg	Cys
						65		70		75			80		

Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe Lys
85 90 95
Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser Ser Leu
100 105 110
Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu Cys His Ala
115 120 125
His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys Lys Tyr Ser Gln
130 135 140
Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln Ala Ala Val Val Lys
145 150 155 160
Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln Trp Met Glu Glu Thr Glu
165 170 175

<210> 2

<211> 152

<212> PRT

<213> Homo sapiens

<400> 2

Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile Ala Thr Asn Leu Gln
1 5 10 15
Glu Ile Arg Asn Gly Phe Ser Asp Ile Arg Gly Ser Val Gln Ala Lys
20 25 30
Asp Gly Asn Ile Asp Ile Arg Ile Leu Arg Arg Thr Glu Ser Leu Gln
35 40 45
Asp Thr Lys Pro Ala Asn Arg Cys Cys Leu Leu Arg His Leu Leu Arg
50 55 60
Leu Tyr Leu Asp Arg Val Phe Lys Asn Tyr Gln Thr Pro Asp His Tyr
65 70 75 80
Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys
85 90 95
Lys Asp Leu Arg Leu Cys His Ala His Met Thr Cys His Cys Gly Glu
100 105 110
Glu Ala Met Lys Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu
115 120 125
Glu Pro Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu
130 135 140
Leu Gln Trp Met Glu Glu Thr Glu
145 150

<210> 3

<211> 151

<212> PRT

<213> Homo sapiens

<400> 3

Met Lys Ala Ser Ser Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr
1 5 10 15
Leu Leu Trp Thr Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser
20 25 30
Cys Val Ile Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Asp
35 40 45
Ile Arg Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile
50 55 60
Leu Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
65 70 75 80
Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe Lys
85 90 95
Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser Ser Leu
100 105 110
Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu Cys Leu Glu
115 120 125
Pro Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu
130 135 140
Gln Trp Met Glu Glu Thr Glu
145 150

<210> 4

<211> 127

<212> PRT

<213> Homo sapiens

<400> 4

Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile Ala Thr Asn Leu Gln
1 5 10 15
Glu Ile Arg Asn Gly Phe Ser Asp Ile Arg Gly Ser Val Gln Ala Lys
20 25 30
Asp Gly Asn Ile Asp Ile Arg Ile Leu Arg Arg Thr Glu Ser Leu Gln
35 40 45
Asp Thr Lys Pro Ala Asn Arg Cys Cys Leu Leu Arg His Leu Leu Arg
50 55 60
Leu Tyr Leu Asp Arg Val Phe Lys Asn Tyr Gln Thr Pro Asp His Tyr
65 70 75 80
Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys
85 90 95

Lys Asp Leu Arg Leu Cys Leu Glu Pro Gln Ala Ala Val Val Lys Ala
100 105 110
Leu Gly Glu Leu Asp Ile Leu Leu Gln Trp Met Glu Glu Thr Glu
115 120 125

<210> 5
<211> 176
<212> PRT
<213> *Mus musculus*

<400> 5

Met Lys Gly Phe Gly Leu Ala Phe Gly Leu Phe Ser Ala Val Gly Phe
1 5 10 15
Leu Leu Trp Thr Pro Leu Thr Gly Leu Lys Thr Leu His Leu Gly Ser
20 25 30
Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
35 40 45
Ile Arg Asp Ser Val Gln Ala Glu Asp Thr Asn Ile Asp Ile Arg Ile
50 55 60
Leu Arg Thr Thr Glu Ser Leu Lys Asp Ile Lys Ser Leu Asp Arg Cys
65 70 75 80
Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val Phe Lys
85 90 95
Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser Ser Leu
100 105 110
Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys His Ser
115 120 125
His Met Ala Cys His Cys Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln
130 135 140
Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val Val Lys
145 150 155 160
Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu Met Leu
165 170 175

<210> 6
<211> 152
<212> PRT
<213> *Mus musculus*

<400> 6

Leu Lys Thr Leu His Leu Gly Ser Cys Val Ile Thr Ala Asn Leu Gln
1 5 10 15

Ala Ile Gln Lys Glu Phe Ser Glu Ile Arg Asp Ser Val Gln Ala Glu
20 25 30
Asp Thr Asn Ile Asp Ile Arg Ile Leu Arg Thr Thr Glu Ser Leu Lys
35 40 45
Asp Ile Lys Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu Val Arg
50 , 55 60
Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp His His
65 70 75 80
Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile Ile Lys
85 90 95
Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys Gly Glu
100 105 110
Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile Glu Leu
115 120 125
Glu Leu Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Gly Ile Leu
130 135 140
Leu Arg Trp Met Glu Glu Met Leu
145 150

<210> 7
<211> 144
<212> PRT
<213> *Mus musculus*

<400> 7
Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
1 5 10 15
Ile Arg Asp Ser Val Gln Ala Glu Asp Thr Asn Ile Asp Ile Arg Ile
20 25 30
Leu Arg Thr Thr Glu Ser Leu Lys Asp Ile Lys Ser Leu Asp Arg Cys
35 40 45
Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val Phe Lys
50 55 60
Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser Ser Leu
65 70 75 80
Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys His Ser
85 90 95
His Met Ala Cys His Cys Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln
100 105 110
Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val Val Lys
115 120 125
Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu Met Leu
130 135 140

<210> 8
<211> 154
<212> PRT
<213> Mus musculus

<400> 8
Met Lys Gly Phe Gly Leu Ala Phe Gly Leu Phe Ser Ala Val Gly Phe
1 5 10 15
Leu Leu Trp Thr Pro Leu Thr Gly Leu Lys Thr Leu His Leu Gly Ser
20 25 30
Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
35 40 45
Ile Arg Asp Ser Val Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu
50 55 60
Val Arg Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp
65 70 75 80
His His Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile
85 90 95
Ile Lys Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys
100 105 110
Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile
115 120 125
Glu Leu Glu Leu Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Gly
130 135 140
Ile Leu Leu Arg Trp Met Glu Glu Met Leu
145 150

<210> 9
<211> 130
<212> PRT
<213> Homo sapiens

<400> 9
Leu Lys Thr Leu His Leu Gly Ser Cys Val Ile Thr Ala Asn Leu Gln
1 5 10 15
Ala Ile Gln Lys Glu Phe Ser Glu Ile Arg Asp Ser Val Ser Leu Asp
20 25 30
Arg Cys Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val
35 40 45
Phe Lys Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser
50 55 60

<210> 10
<211> 3516
<212> DNA
<213> *Homo sapiens*

<220>
<221> CDS
<222> (237) . . . (1895)

<400> 10

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gcgtggcacg cagagccccca ggcgcgagc tgaggccgcg cggccgcgct tggccccagc	180
gggcgtggga ctgagcagtc tgctgccccc cgacatgtga cccagccccg ccgccc atg	239
	Met
	1

ctg ctg ttg ctc ctg gcg gcg cct tgg gga cgg gca gtt ccc tgt gtc 335
 Leu Leu Leu Leu Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val
 20 25 30

tct ggt ggt ttg cct aaa cct gca aac atc acc ttc tta tcc atc aac 383
Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn
35 40 45

atg aag aat gtc cta caa tgg act cca cca gag ggt ctt caa gga gtt 431
Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val
50 55 60 65

aaa gtt act tac act gtg cag tat ttc ata tat ggg caa aag aaa tgg Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp 70 75 80	479
ctg aat aaa tca gaa tgc aga aat atc aat aga acc tac tgt gat ctt Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu 85 90 95	527
tct gct gaa act tct gac tac gaa cac cag tat tat gcc aaa gtt aag Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys 100 105 110	575
gcc att tgg gga aca aag tgt tcc aaa tgg gct gaa agt gga cgg ttc Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe 115 120 125	623
tat cct ttt tta gaa aca caa att ggc cca cca gag gtg gca ctg act Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr 130 135 140 145	671
aca gat gag aag tcc att tct gtt gtc ctg aca gct cca gag aag tgg Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp 150 155 160	719
aag aga aat cca gaa gac ctt cct gtt tcc atg caa caa ata tac tcc Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser 165 170 175	767
aat ctg aag tat aac gtg tct gtg ttg aat act aaa tca aac aga acg Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr 180 185 190	815
tgg tcc cag tgt gtg acc aac cac acg ctg gtg ctc acc tgg ctg gag Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu 195 200 205	863
ccg aac act ctt tac tgc gta cac gtg gag tcc ttc gtc cca ggg ccc Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro 210 215 220 225	911
cct cgc cgt gct cag cct tct gag aag cag tgt gcc agg act ttg aaa	959

Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys				
230	235	240		
gat caa tca tca gag ttc aag gct aaa atc atc ttc tgg tat gtt ttg				1007
Asp Gln Ser Ser Glu Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu				
245	250	255		
ccc ata tct att acc gtg ttt ctt ttt tct gtg atg ggc tat tcc atc				1055
Pro Ile Ser Ile Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser Ile				
260	265	270		
tac cga tat atc cac gtt ggc aaa gag aaa cac cca gca aat ttg att				1103
Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu Ile				
275	280	285		
ttg att tat gga aat gaa ttt gac aaa aga ttc ttt gtg cct gct gaa				1151
Leu Ile Tyr Gly Asn Glu Phe Asp Lys Arg Phe Phe Val Pro Ala Glu				
290	295	300	305	
aaa atc gtg att aac ttt atc acc ctc aat atc tcg gat gat tct aaa				1199
Lys Ile Val Ile Asn Phe Ile Thr Leu Asn Ile Ser Asp Asp Ser Lys				
310	315	320		
att tct cat cag gat atg agt tta ctg gga aaa agc agt gat gta tcc				1247
Ile Ser His Gln Asp Met Ser Leu Leu Gly Lys Ser Ser Asp Val Ser				
325	330	335		
agc ctt aat gat cct cag ccc agc ggg aac ctg agg ccc cct cag gag				1295
Ser Leu Asn Asp Pro Gln Pro Ser Gly Asn Leu Arg Pro Pro Gln Glu				
340	345	350		
gaa gag gag gtg aaa cat tta ggg tat gct tcg cat ttg atg gaa att				1343
Glu Glu Glu Val Lys His Leu Gly Tyr Ala Ser His Leu Met Glu Ile				
355	360	365		
ttt tgt gac tct gaa gaa aac acg gaa ggt act tct ttc acc cag caa				1391
Phe Cys Asp Ser Glu Glu Asn Thr Glu Gly Thr Ser Phe Thr Gln Gln				
370	375	380	385	
gag tcc ctc agc aga aca ata ccc ccg gat aaa aca gtc att gaa tat				1439
Glu Ser Leu Ser Arg Thr Ile Pro Pro Asp Lys Thr Val Ile Glu Tyr				
390	395	400		

gaa tat gat gtc aga acc act gac att tgt gcg ggg cct gaa gag cag Glu Tyr Asp Val Arg Thr Thr Asp Ile Cys Ala Gly Pro Glu Glu Gln 405 410 415	1487
gag ctc agt ttg cag gag gag gtg tcc aca caa gga aca tta ttg gag Glu Leu Ser Leu Gln Glu Glu Val Ser Thr Gln Gly Thr Leu Leu Glu 420 425 430	1535
tcg cag gca gcg ttg gca gtc ttg ggc ccg caa acg tta cag tac tca Ser Gln Ala Ala Leu Ala Val Leu Gly Pro Gln Thr Leu Gln Tyr Ser 435 440 445	1583
tac acc cct cag ctc caa gac tta gac ccc ctg gcg cag gag cac aca Tyr Thr Pro Gln Leu Gln Asp Leu Asp Pro Leu Ala Gln Glu His Thr 450 455 460 465	1631
gac tcg gag gag ggg ccg gag gaa gag cca tcg acg acc ctg gtc gac Asp Ser Glu Glu Gly Pro Glu Glu Pro Ser Thr Thr Leu Val Asp 470 475 480	1679
tgg gat ccc caa act ggc agg ctg tgt att cct tcg ctg tcc agc ttc Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser Leu Ser Ser Phe 485 490 495	1727
gac cag gat tca gag ggc tgc gag cct tct gag ggg gat ggg ctc gga Asp Gln Asp Ser Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu Gly 500 505 510	1775
gag gag ggt ctt cta tct aga ctc tat gag gag ccg gct cca gac agg Glu Glu Gly Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp Arg 515 520 525	1823
cca cca gga gaa aat gaa acc tat ctc atg caa ttc atg gag gaa tgg Pro Pro Gly Glu Asn Glu Thr Tyr Leu Met Gln Phe Met Glu Glu Trp 530 535 540 545	1871
ggg tta tat gtg cag atg gaa aac ttagtgcac acatcccttt gcctttgtt Gly Leu Tyr Val Gln Met Glu Asn 550	1925
tcctgtgcaa acaagttagt caccctttg atccccagcca taaagtaccc gggatgaaag aagtttttc cagtttgtca gtgtctgtga gaattactta tttctttctt ctattctcat agcacgtgtg tgattggttc atgcatgttag gtctcttaac aatgtggtg ggcctctgga	1985 2045 2105

gtccaggggc tggccggttg ttctatgcag agaaagcagt caataaatgt ttgccagact	2165
gggtgcagaa ttatttcagg tgggtgact ctggcctt gttcattat ttcaaacaa	2225
gcacacttgt acaattat tctggact tcccatatgc acatagcact gtaaaaaata	2285
tttccaaag atcactcatt ttataaatac cactttca gaattgggtt tattgcgagc	2345
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tttagtaggg gcttattgtc tctcaaaact aacctaaaag aaaatgacac attttataat	2645
agaatattac atttatttct ggaagtgtgt tttcaaaaag atatttacat agtctgtaaa	2705
ctagaaagtg ttaggtaaag ctctaggtt ctgtgttact attataatata taaacattcg	2765
aataggcagt cgttcaaaga ctcttggaa tatctatgaa tgaatatcct ctattcttat	2825
aatattaaaa cccataagta aatataggac atacaagaga aatgagttaa atgactatgt	2885
aagggagagt ttattttaaat ttgatgaaat ttactgttagg aactaaacta tgccataaaa	2945
caatagctt ctagttcatt tccagtaact gttccatct ctttaccac ttgttaagaa	3005
aattaaattc ttcagtcacg ctgtttaaa atggacaaa atctattaag ttgaaccata	3065
tataattgtg gatatttggc tggttttaat ctgacaagca gtaacttcat atggtttgc	3125
ttaatata tttgttttag tcatgaactc ataatccatt gatgctttt catgagaaga	3185
gatatgaccc atatttcctt attgatatta ttgttacagg cagacaaccc tggtaggaga	3245
gatggattct ggggtcatga ccttcgtga ttatccgcaa atgcaaacag tttcagatct	3305
aatggttaa tttagggagt aattatatta atcagagtgt tctgttattc tcaatctta	3365
tagaaacgat tctgctgggtt ttgaagaaca gatgttattac actaactgta aaagtagttc	3425
aagagtgaga aagaataaaat tgttattaag agcaaaagaa aaataaaagtg attgatgata	3485
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<210> 11
 <211> 553
 <212> PRT
 <213> Homo sapiens

<400> 11
 Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Pro Leu Pro Pro
 1 5 10 15
 Leu Leu Leu Leu Leu Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys
 20 25 30
 Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile
 35 40 45
 Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly
 50 55 60
 Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys
 65 70 75 80
 Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp
 85 90 95

Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val
100 105 110
Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg
115 120 125
Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu
130 135 140
Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys
145 150 155 160
Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr
165 170 175
Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg
180 185 190
Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu
195 200 205
Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly
210 215 220
Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu
225 230 235 240
Lys Asp Gln Ser Ser Glu Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val
245 250 255
Leu Pro Ile Ser Ile Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser
260 265 270
Ile Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu
275 280 285
Ile Leu Ile Tyr Gly Asn Glu Phe Asp Lys Arg Phe Phe Val Pro Ala
290 295 300
Glu Lys Ile Val Ile Asn Phe Ile Thr Leu Asn Ile Ser Asp Asp Ser
305 310 315 320
Lys Ile Ser His Gln Asp Met Ser Leu Leu Gly Lys Ser Ser Asp Val
325 330 335
Ser Ser Leu Asn Asp Pro Gln Pro Ser Gly Asn Leu Arg Pro Pro Gln
340 345 350
Glu Glu Glu Glu Val Lys His Leu Gly Tyr Ala Ser His Leu Met Glu
355 360 365
Ile Phe Cys Asp Ser Glu Glu Asn Thr Glu Gly Thr Ser Phe Thr Gln
370 375 380
Gln Glu Ser Leu Ser Arg Thr Ile Pro Pro Asp Lys Thr Val Ile Glu
385 390 395 400
Tyr Glu Tyr Asp Val Arg Thr Thr Asp Ile Cys Ala Gly Pro Glu Glu
405 410 415
Gln Glu Leu Ser Leu Gln Glu Glu Val Ser Thr Gln Gly Thr Leu Leu
420 425 430

Glu Ser Gln Ala Ala Leu Ala Val Leu Gly Pro Gln Thr Leu Gln Tyr
 435 440 445
 Ser Tyr Thr Pro Gln Leu Gln Asp Leu Asp Pro Leu Ala Gln Glu His
 450 455 460
 Thr Asp Ser Glu Glu Gly Pro Glu Glu Glu Pro Ser Thr Thr Leu Val
 465 470 475 480
 Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser Leu Ser Ser
 485 490 495
 Phe Asp Gln Asp Ser Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu
 500 505 510
 Gly Glu Glu Gly Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp
 515 520 525
 Arg Pro Pro Gly Glu Asn Glu Thr Tyr Leu Met Gln Phe Met Glu Glu
 530 535 540
 Trp Gly Leu Tyr Val Gln Met Glu Asn
 545 550

<210> 12
 <211> 221
 <212> PRT
 <213> Homo sapiens

<400> 12

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15
 Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160

Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Ser Ser Glu Phe Lys Ala Lys
 210 215 220

<210> 13
 <211> 971
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (18)...(950)

<400> 13

gaattcgagt	ctaccaa	atg	cag	act	ttc	aca	atg	gtt	cta	gaa	gaa	atc	50
		Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	
		1					5					10	

tgg	aca	agt	ctt	ttc	atg	tgg	ttt	ttc	tac	gca	ttg	att	cca	tgt	ttg	98
Trp	Thr	Ser	Leu	Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	
					15			20					25			

ctc	aca	gat	gaa	gtg	gcc	att	ctg	cct	gcc	cct	cag	aac	ctc	tct	gta	146
Leu	Thr	Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	
					30			35			40					

ctc	tca	acc	aac	atg	aag	cat	ctc	ttg	atg	tgg	agc	cca	gtg	atc	gct	194
Leu	Ser	Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	
					45			50			55					

cct	gga	gaa	aca	gtg	tac	tat	tct	gtc	gaa	tac	cag	ggg	gag	tac	gag	242
Pro	Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
					60			65			70			75		

agc	ctg	tac	acg	agc	cac	atc	tgg	atc	ccc	agc	agc	tgg	tgc	tca	ctc	290
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	
					80			85			90					

act gaa ggt cct gag tgt gat gtc act gat gac atc acg gcc act gtg			338
Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val			
95	100	105	
cca tac aac ctt cgt gtc agg gcc aca ttg ggc tca cag acc tca gcc			386
Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala			
110	115	120	
tgg agc atc ctg aag cat ccc ttt aat aga aac tca acc atc ctt acc			434
Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr			
125	130	135	
cga cct ggg atg gag atc acc aaa gat ggc ttc cac ctg gtt att gag			482
Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu			
140	145	150	155
ctg gag gac ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac tgg agg			530
Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg			
160	165	170	
agg gag cct ggt gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt			578
Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly			
175	180	185	
att cca gtg cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg			626
Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val			
190	195	200	
aag gcc cag aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc			674
Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser			
205	210	215	
cag aca gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg gta ctg			722
Gln Thr Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu			
220	225	230	235
gcc ctg ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc gtg cca			770
Ala Leu Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val Val Pro			
240	245	250	
ctg ttc gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt tgc ccc			818
Leu Phe Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro			
255	260	265	

gtg gtg gtc ctc cca gac acc ttg aaa ata acc aat tca ccc cag aag	866
Val Val Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys	
270 275 280	
tta atc agc tgc aga agg gag gag gtg gat gcc tgt gcc acg gct gtg	914
Leu Ile Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val	
285 290 295	
atg tct cct gag gaa ctc ctc agg gcc tgg atc tca tagtttgcg	960
Met Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser	
300 305 310	
gaaggctcga g	971
<210> 14	
<211> 311	
<212> PRT	
<213> Homo sapiens	
<400> 14	
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1 5 10 15	
Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val	
20 25 30	
Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met	
35 40 45	
Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val	
50 55 60	
Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser	
65 70 75 80	
His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu	
85 90 95	
Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg	
100 105 110	
Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys	
115 120 125	
His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu	
130 135 140	
Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly	
145 150 155 160	
Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala	
165 170 175	

Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu
					180				185					190	
Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe
					195				200				205		
Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val
					210				215				220		
Glu	Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
					225				230				235		240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	Lys
					245				250				255		
Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	Leu	Pro
					260				265				270		
Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	Ser	Cys	Arg
					275				280				285		
Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	Ser	Pro	Glu	Glu
					290				295				300		
Leu	Leu	Arg	Ala	Trp	Ile	Ser									
					305				310						

<210> 15
<211> 203
<212> PRT
<213> *Homo sapiens*

Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
145 150 155 160
Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
165 170 175
Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
180 185 190
Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro
195 200

<210> 16
<211> 33
<212> DNA
<213> Homo sapiens

<400> 16
gcgaattcga gtctaccaaa tgcagacttt cac 33

<210> 17
<211> 32
<212> DNA
<213> Homo sapiens

<400> 17
cgctcgagcc ttccgcaaac ctatgagatc ca 32

<210> 18
<211> 1382
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (132)...(1034)

<400> 18
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agatggctga gatggacaga atgctttatt ttggaaagaa acaatgttct aggtcaaact 120
gagtctacca a atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca 170
Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr
1 5 10

agt ctt ttc atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca 218

gtg cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc	746
Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala	
190 195 200 205	
cag aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca	794
Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr	
210 215 220	
gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg gta ctg gcc ctg	842
Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu	
225 230 235	
ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc gtg cca ctg ttc	890
Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe	
240 245 250	
gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt tgc ccc gtg gtg	938
Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val	
255 260 265	
gtc ctc cca gac acc ttg aaa ata acc aat tca ccc cag gtt aat cag	986
Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Val Asn Gln	
270 275 280 285	
ctg cag aag gga gga ggt gga tgc ctg tgc cac ggc tgt gat gtc tcc	1034
Leu Gln Lys Gly Gly Gly Cys Leu Cys His Gly Cys Asp Val Ser	
290 295 300	
tgaggaactc ctcaggccct ggatctcata tcaggtttgc ggaaggccc aggtgaagcc	1094
gagaacctgg tctgcatgac atggaaacca tgagggaca agttgtgtt ctgtttccg	1154
ccacggacaa gggatgagag aagtaggaag agcctgttgc ctacaagtct agaagcaacc	1214
atcagaggca gggtggtttg tctaacagaa caactgactg aggctatggg ggttgtgacc	1274
tctagacttt gggcttccac ttgcttgct gagcaaccct gggaaaagtg acttcatccc	1334
ttcggtccca agtttctca tctgtaatgg gggatcccta caaaaactg	1382

<210> 19
 <211> 301
 <212> PRT
 <213> Homo sapiens

<400> 19
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 1 5 10 15

Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
20 25 30
Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
35 40 45
Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
50 55 60
Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
65 70 75 80
His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
85 90 95
Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
100 105 110
Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
115 120 125
His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
130 135 140
Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
145 150 155 160
Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala
165 170 175
Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
180 185 190
Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
195 200 205
Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
210 215 220
Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
225 230 235 240
Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp Lys
245 250 255
Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val Leu Pro
260 265 270
Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Val Asn Gln Leu Gln Lys
275 280 285
Gly Gly Gly Cys Leu Cys His Gly Cys Asp Val Ser
290 295 300

<210> 20

<211> 1081

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (9)...(1067)

<400> 20

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Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser
1 5 10

ctt ttc atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca gat 98
Leu Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp
15 20 25 30

gaa gtg gcc att ctg cct gcc cct cag aac ctc tct gta ctc tca acc 146
Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr
35 40 45

aac atg aag cat ctc ttg atg tgg agc cca gtg atc gcg cct gga gaa 194
Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu
50 55 60

aca gtg tac tat tct gtc gaa tac cag ggg gag tac gag agc ctg tac 242
Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr
65 70 75

acg agc cac atc tgg atc ccc agc agc tgg tgc tca ctc act gaa ggt 290
Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly
80 85 90

cct gag tgt gat gtc act gat gac atc acg gcc act gtg cca tac aac 338
Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn
95 100 105 110

ctt cgt gtc agg gcc aca ttg ggc tca cag acc tca gcc tgg agc atc 386
Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile
115 120 125

ctg aag cat ccc ttt aat aga aac tca acc atc ctt acc cga cct ggg 434
Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly
130 135 140

atg gag atc ccc aaa cat ggc ttc cac ctg gtt att gag ctg gag gac 482
Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp
145 150 155

ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac tgg acg agg gag cct	530
Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro	
160 165 170	
ggt gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt att cca gtg	578
Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val	
175 180 185 190	
cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag	626
His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln	
195 200 205	
aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa	674
Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu	
210 215 220	
tgt gtg gag gtg caa gga gag gcc gga ggt ggt ggc agt gga ggc ggc	722
Cys Val Glu Val Gln Gly Glu Ala Gly Gly Ser Gly Gly Gly	
225 230 235	
ggt agc gga ggc ggt ggc agt cga act gtg gct gca cca tct gtc ttc	770
Gly Ser Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val Phe	
240 245 250	
atc ttc ccg cca tct gat gag cag ttg aaa tct gga act gcc tct gtt	818
Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val	
255 260 265 270	
gtg tgc ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg	866
Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp	
275 280 285	
aag gtg gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca	914
Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr	
290 295 300	
gag cag gac aag gac agc acc tac agc ctc agc agc acc ctg acg	962
Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr	
305 310 315	
ctg agc aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc	1010

Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val							
320	325	330	335	340	345	350	350
acc cat cag ggc ctg agc tcg ccc gtc aca aag aac ttc aac agg gga							1058
Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly							
gag tgt taa tctagaggcg cgcc							1081
Glu Cys *							
<210> 21							
<211> 352							
<212> PRT							
<213> Homo sapiens							
<400> 21							
Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe							
1	5	10				15	
Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val							
20	25				30		
Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met							
35	40				45		
Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val							
50	55	60					
Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser							
65	70	75			80		
His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu							
85	90				95		
Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg							
100	105				110		
Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys							
115	120				125		
His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu							
130	135	140					
Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly							
145	150	155			160		
Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala							
165	170				175		
Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu							
180	185				190		
Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe							
195	200				205		

Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val
210						215					220				
Glu	Val	Gln	Gly	Glu	Ala	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser
225						230				235					240
Gly	Gly	Gly	Gly	Ser	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe
					245					250					255
Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys
						260			265						270
Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val
						275			280						285
Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln
						290			295						300
Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser
305						310					315				320
Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His
						325				330					335
Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys
						340			345						350

<210> 22
<211> 1801
<212> DNA
<213> *Homo sapiens*

<220>
<221> CDS
<222> (8)...(1789)

<400> 22

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      Met Asp Ala Met Lys Arg Gly Leu Cys Cys Val Leu Leu Leu
      1           5           10

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tgt ggc gcc gtc ttc gtt tcg ctc agc cag gaa atc cat gcc gag ttg 97
Cys Gly Ala Val Phe Val Ser Leu Ser Gln Glu Ile His Ala Glu Leu
15          20          25          30

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aga cgc ttc cgt aga gtt ccc tgt gtc tct ggt ggt ttg cct aaa cct 145
 Arg Arg Phe Arg Arg Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro
 35 40 45

gca aac atc acc ttc tta tcc atc aac atq aaq aat qtc cta caa tqq 193

Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp	50	55	60	
act cca cca gag ggt ctt caa gga gtt aaa gtt act tac act gtg cag				241
Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln				
65	70	75		
tat ttc ata tat ggg caa aag aaa tgg ctg aat aaa tca gaa tgc aga				289
Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg				
80	85	90		
aat atc aat aga acc tac tgt gat ctt tct gct gaa act tct gac tac				337
Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr				
95	100	105	110	
gaa cac cag tat tat gcc aaa gtt aag gcc att tgg gga aca aag tgt				385
Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys				
115	120	125		
tcc aaa tgg gct gaa agt gga cgg ttc tat cct ttt tta gaa aca caa				433
Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln				
130	135	140		
att ggc cca cca gag gtg gca ctg act aca gat gag aag tcc att tct				481
Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser				
145	150	155		
gtt gtc ctg aca gct cca gag aag tgg aag aga aat cca gaa gac ctt				529
Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu				
160	165	170		
cct gtt tcc atg caa caa ata tac tcc aat ctg aag tat aac gtg tct				577
Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser				
175	180	185	190	
gtg ttg aat act aaa tca aac aga acg tgg tcc cag tgt gtg acc aac				625
Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn				
195	200	205		
cac acg ctg gtg ctc acc tgg ctg gag ccg aac act ctt tac tgc gta				673
His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val				
210	215	220		

cac gtg gag tcc ttc gtc cca ggg ccc cct cgc cgt gct cag cct tct			721
His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser			
225	230	235	
gag aag cag tgt gcc agg act ttg aaa gat caa ggt gga ggc ggt tca			769
Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Gly Gly Gly Ser			
240	245	250	
ggc gga ggt ggc tct ggc ggt ggc gga tcg gcc tcc acc aag ggc cca			817
Gly Gly Gly Ser Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro			
255	260	265	270
tcg gtc ttc ccc ctg gca ccc tcc tcc aag agc acc tct ggg ggc aca			865
Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr			
275	280	285	
gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa ccg gtg acg			913
Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr			
290	295	300	
gtg tcg tgg aac tca ggc gcc ctg acc agc ggc gtg cac acc ttc ccg			961
Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro			
305	310	315	
gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc gtg gtg acc			1009
Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr			
320	325	330	
gtg ccc tcc agc agc ttg ggc acc cag acc tac atc tgc aac gtg aat			1057
Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn			
335	340	345	350
cac aag ccc agc aac acc aag gtg gac aag aaa gtt gag ccc aaa tct			1105
His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser			
355	360	365	
tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa gcc gag			1153
Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu			
370	375	380	
ggg gca ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc			1201
Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu			
385	390	395	

atg atc tcc cg acc cct gag gtc aca tgc gtg gtg gac gtg agc Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser 400 405 410	1249
cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu 415 420 425 430	1297
gtg cat aat gcc aag aca aag ccg cg gag gag cag tac aac agc acg Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr 435 440 445	1345
tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn 450 455 460	1393
ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca tcc tcc Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser 465 470 475	1441
atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag Ile Glu Lys Thr Ile Ser Lys Ala Lys Gln Pro Arg Glu Pro Gln 480 485 490	1489.
gtg tac acc ctg ccc cca tcc cgat gag ctg acc aag aac cag gtc Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 495 500 505 510	1537
agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 515 520 525	1585
gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg cct Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 530 535 540	1633
ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr 545 550 555	1681
gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg	1729

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val	560	565	570	
atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg				1777
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu				
575	580	585	590	
tct ccg ggt aaa taatctagat ct				1801
Ser Pro Gly Lys				
<210> 23				
<211> 594				
<212> PRT				
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Ala Val Phe Val Ser Leu Ser Gln Glu Ile His Ala Glu Leu Arg Arg				
20 25 30				
Phe Arg Arg Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn				
35 40 45				
Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro				
50 55 60				
Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe				
65 70 75 80				
Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile				
85 90 95				
Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His				
100 105 110				
Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys				
115 120 125				
Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly				
130 135 140				
Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val				
145 150 155 160				
Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val				
165 170 175				
Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu				
180 185 190				
Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr				
195 200 205				

Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val
210 215 220
Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys
225 230 235 240
Gln Cys Ala Arg Thr Leu Lys Asp Gln Gly Gly Gly Ser Gly Gly
245 250 255
Gly Gly Ser Gly Gly Ser Ala Ser Thr Lys Gly Pro Ser Val
260 265 270
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
275 280 285
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
290 295 300
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
305 310 315 320
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
325 330 335
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
340 345 350
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
355 360 365
Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala
370 375 380
Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
385 390 395 400
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
405 410 415
Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
420 425 430
Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
435 440 445
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
450 455 460
Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu
465 470 475 480
Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
485 490 495
Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
500 505 510
Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
515 520 525
Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
530 535 540

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
545 550 555 560
Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
565 570 575
Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
580 585 590
Gly Lys

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<210> 25
<211> 52
<212> DNA
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<400> 25
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<210> 26
<211> 53
<212> DNA
<213> Homo sapiens

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<210> 27
<211> 38
<212> DNA
<213> Homo sapiens

<400> 27
ggcgcgccctc tagattaaca ctctccctg ttgaagct 38

<210> 28
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<212> DNA

<213> Homo sapiens

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gtcgaccatg gatgcaatga agagagggct 30

<210> 29
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cacagggAAC tctacggAAAG cgtctcaact 30

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<212> DNA
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cttccgtaga gttccctgtg tctctggtgg ttt 33

<210> 31
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<400> 31
gccagagCCA cctccgcCTG aaccgcCTCC accttgatCT ttcaaagtCC tgg 53

<210> 32
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caggcggagg tggctctggc ggtggcggat cggcctccac caaggcccA t 51

<210> 33
<211> 20
<212> DNA
<213> Homo sapiens

<400> 33

ctgggcacgg tgggcatgtg	20
<210> 34	
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<400> 34	
cacatgccca ccgtgcccag	20
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agatctagat tatttacccg gagacagggg g	31
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Met His Thr Pro Gly Thr	
1 5	
ccg gcg ccg ggc cac ccg gac ccg ccg cca ctg ttg ctg ctc acg ctg	103
Pro Ala Pro Gly His Pro Asp Pro Pro Leu Leu Leu Leu Thr Leu	
10 15 20	
ctt ctg ctg ctg gcc gct tcg gga cgc gca gtt cct tgt gtc ttc tgt	151
Leu Leu Leu Ala Ala Ser Gly Arg Ala Val Pro Cys Val Phe Cys	
25 30 35	
ggt ttg cct aaa cct aca aat atc acc ttc tta tcc atc aac atg aag	199
Gly Leu Pro Lys Pro Thr Asn Ile Thr Phe Leu Ser Ile Asn Met Lys	
40 45 50	

aat gtc ctg cat tgg aat cca cca gag agt cta cac gga gtt gaa gtc Asn Val Leu His Trp Asn Pro Pro Glu Ser Leu His Gly Val Glu Val 55 60 65 70	247
aca tac act gtg caa tat ttc ata tat ggg cag aag aaa tgg ctg aat Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn 75 80 85	295
gcc tct aaa tgc ggg agt atc aac agg acc tac tgt gac ctt tct gtt Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr Tyr Cys Asp Leu Ser Val 90 95 100	343
gag acc tca gac tat gaa cac cag ttc tat gcc aaa gtg aag gcc att Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr Ala Lys Val Lys Ala Ile 105 110 115	391
tgg gaa gcc agg tgc tcc gaa tgg gcc gag acg gaa cgc ttc tat cct Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu Thr Glu Arg Phe Tyr Pro 120 125 130	439
ttc ttg gaa act caa gtc agc cca cca gag att gcc ctg aca act ggc Phe Leu Glu Thr Gln Val Ser Pro Pro Glu Ile Ala Leu Thr Thr Gly 135 140 145 150	487
gag aag tcc atc tct att gcc ctg aca gca cca gag aag tgg aaa aga Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala Pro Glu Lys Trp Lys Arg 155 160 165	535
aat cca caa gac cac act gtt tct atg caa cag ata tac ccc aat ttg Asn Pro Gln Asp His Thr Val Ser Met Gln Gln Ile Tyr Pro Asn Leu 170 175 180	583
aag tac aat gtg tct gtg tat aac act aag tcg aga aga acg tgg tcc Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys Ser Arg Arg Thr Trp Ser 185 190 195	631
cag tgt gtc acc aac agc aca ctg gtc ctc agc tgg ctg gag ccc aac Gln Cys Val Thr Asn Ser Thr Leu Val Leu Ser Trp Leu Glu Pro Asn 200 205 210	679
act ctg tat tgt gtc cac gtg gag tcc ctt gtc cca ggg ccc cct cgc	727

Thr Leu Tyr Cys Val His Val Glu Ser Leu Val Pro Gly Pro Pro Arg			
215	220	225	230
ctc ccg atg cct tct cag aag cag tgc atc agt act ttg gaa gtt caa			775
Leu Pro Met Pro Ser Gln Lys Gln Cys Ile Ser Thr Leu Glu Val Gln			
235	240	245	
aca tca gca tgg aag gct aaa gtc atc ttc tgg tat gtc ttc ctc aca			823
Thr Ser Ala Trp Lys Ala Lys Val Ile Phe Trp Tyr Val Phe Leu Thr			
250	255	260	
tct gtt atc gtg ttt ctt ttc tcc gca att ggc tac ttg gtt tac cgt			871
Ser Val Ile Val Phe Leu Phe Ser Ala Ile Gly Tyr Leu Val Tyr Arg			
265	270	275	
tac atc cat gtt ggc aag gaa aaa cac cca gca aat ttg gta ctg att			919
Tyr Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu Val Leu Ile			
280	285	290	
tat aga aat gaa att ggc aca aga gtc ttt gaa cct act gaa aca atc			967
Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe Glu Pro Thr Glu Thr Ile			
295	300	305	310
aca ctt aat ttt atc acc ttc agt atg ttg gat gat act aaa att tct			1015
Thr Leu Asn Phe Ile Thr Phe Ser Met Leu Asp Asp Thr Lys Ile Ser			
315	320	325	
cca aag gat atg aat tta ctg gac aaa agc agt gat gac atc agt gtt			1063
Pro Lys Asp Met Asn Leu Leu Asp Lys Ser Ser Asp Asp Ile Ser Val			
330	335	340	
aat gag cct gag cac aat gag gcc tgg gag ccg cac tgg gag gag gtg			1111
Asn Asp Pro Glu His Asn Glu Ala Trp Glu Pro His Trp Glu Glu Val			
345	350	355	
gag ggg caa cat tta gga tgc tct tcg cat ttg atg gac gct gtc tgt			1159
Glu Gly Gln His Leu Gly Cys Ser Ser His Leu Met Asp Ala Val Cys			
360	365	370	
ggt gct gag caa aga gac gga gac acc tcc cta acc cag cat ggg tgg			1207
Gly Ala Glu Gln Arg Asp Gly Asp Thr Ser Leu Thr Gln His Gly Trp			
375	380	385	390

ctt aac agc acc atc ccc aca gga gag aca gac act gag cct caa tac Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr Asp Thr Glu Pro Gln Tyr 395	400	405	1255	
aaa gtc cta agt gac ttc tac ggg gag ggt gaa atc caa ctg tcc tgt Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly Glu Ile Gln Leu Ser Cys 410	415	420	1303	
gag ccg gaa gag gcg gcc aga aca gag aaa ata tct gag cca ctg gtg Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys Ile Ser Glu Pro Leu Val 425	430	435	1351	
act tca gca aac ttg gac cca cag ctt gaa gac cta cat cac ctg ggt Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu Asp Leu His His Leu Gly 440	445	450	1399	
cag gag cat act gtc tcc gag gat ggg cca gag gaa gag aca tct ata Gln Glu His Thr Val Ser Glu Asp Gly Pro Glu Glu Glu Thr Ser Ile 455	460	465	470	1447
aca gta gtg gat tgg gac cct caa act ggc agg ctg tgt atc cct tcc Thr Val Val Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser 475	480	485	1495	
tta cct atc ttt ggc cgt gat cct gag aac tat ggt cat tat gag aga Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn Tyr Gly His Tyr Glu Arg 490	495	500	1543	
gac cag ctc tta gag ggt ggc ctt ttg tct aga ctc tat gag aac cag Asp Gln Leu Leu Glu Gly Leu Leu Ser Arg Leu Tyr Glu Asn Gln 505	510	515	1591	
gca cct gac aag cca gag aaa gaa aat gaa aac tgt ctc aca cgg ttt Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu Asn Cys Leu Thr Arg Phe 520	525	530	1639	
atg gag gaa tgg ggg tta cat gta caa atg gaa agc tagtgccagg Met Glu Glu Trp Gly Leu His Val Gln Met Glu Ser 535	540	545	1685	
ctttctgttg actgccaaca aatgaaggaa ccatcccagg gggtgaacag tggcagg atcagtgtca gcaatgagac tggctctct gttcatgaac tttgtcagcc ctgcctcatc c			1745 1805 1806	

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<211> 546
<212> PRT
<213> Mus musculus

<400> 37
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Val Pro Cys Val Phe Cys Gly Leu Pro Lys Pro Thr Asn Ile Thr Phe
35 40 45
Leu Ser Ile Asn Met Lys Asn Val Leu His Trp Asn Pro Pro Glu Ser
50 55 60
Leu His Gly Val Glu Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
65 70 75 80
Gln Lys Lys Trp Leu Asn Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr
85 90 95
Tyr Cys Asp Leu Ser Val Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr
100 105 110
Ala Lys Val Lys Ala Ile Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu
115 120 125
Thr Glu Arg Phe Tyr Pro Phe Leu Glu Thr Gln Val Ser Pro Pro Glu
130 135 140
Ile Ala Leu Thr Thr Gly Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala
145 150 155 160
Pro Glu Lys Trp Lys Arg Asn Pro Gln Asp His Thr Val Ser Met Gln
165 170 175
Gln Ile Tyr Pro Asn Leu Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys
180 185 190
Ser Arg Arg Thr Trp Ser Gln Cys Val Thr Asn Ser Thr Leu Val Leu
195 200 205
Ser Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Leu
210 215 220
Val Pro Gly Pro Pro Arg Leu Pro Met Pro Ser Gln Lys Gln Cys Ile
225 230 235 240
Ser Thr Leu Glu Val Gln Thr Ser Ala Trp Lys Ala Lys Val Ile Phe
245 250 255
Trp Tyr Val Phe Leu Thr Ser Val Ile Val Phe Leu Phe Ser Ala Ile
260 265 270
Gly Tyr Leu Val Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro
275 280 285

Ala Asn Leu Val Leu Ile Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe
290 295 300
Glu Pro Thr Glu Thr Ile Thr Leu Asn Phe Ile Thr Phe Ser Met Leu
305 310 315 320
Asp Asp Thr Lys Ile Ser Pro Lys Asp Met Asn Leu Leu Asp Lys Ser
325 330 335
Ser Asp Asp Ile Ser Val Asn Asp Pro Glu His Asn Glu Ala Trp Glu
340 345 350
Pro His Trp Glu Glu Val Glu Gly Gln His Leu Gly Cys Ser Ser His
355 360 365
Leu Met Asp Ala Val Cys Gly Ala Glu Gln Arg Asp Gly Asp Thr Ser
370 375 380
Leu Thr Gln His Gly Trp Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr
385 390 395 400
Asp Thr Glu Pro Gln Tyr Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly
405 410 415
Glu Ile Gln Leu Ser Cys Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys
420 425 430
Ile Ser Glu Pro Leu Val Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu
435 440 445
Asp Leu His His Leu Gly Gln Glu His Thr Val Ser Glu Asp Gly Pro
450 455 460
Glu Glu Glu Thr Ser Ile Thr Val Val Asp Trp Asp Pro Gln Thr Gly
465 470 475 480
Arg Leu Cys Ile Pro Ser Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn
485 490 495
Tyr Gly His Tyr Glu Arg Asp Gln Leu Leu Glu Gly Leu Leu Ser
500 505 510
Arg Leu Tyr Glu Asn Gln Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu
515 520 525
Asn Cys Leu Thr Arg Phe Met Glu Glu Trp Gly Leu His Val Gln Met
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Glu Ser
545

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<211> 217
<212> PRT
<213> Mus musculus

<400> 38

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 Leu His Gly Val Glu Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly 35 40 45
 Gln Lys Lys Trp Leu Asn Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr 50 55 60
 Tyr Cys Asp Leu Ser Val Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu 85 90 95
 Thr Glu Arg Phe Tyr Pro Phe Leu Glu Thr Gln Val Ser Pro Pro Glu 100 105 110
 Ile Ala Leu Thr Thr Gly Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Gln Asp His Thr Val Ser Met Gln 130 135 140
 Gln Ile Tyr Pro Asn Leu Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys 145 150 155 160
 Ser Arg Arg Thr Trp Ser Gln Cys Val Thr Asn Ser Thr Leu Val Leu 165 170 175
 Ser Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Leu 180 185 190
 Val Pro Gly Pro Pro Arg Leu Pro Met Pro Ser Gln Lys Gln Cys Ile 195 200 205
 Ser Thr Leu Glu Val Gln Thr Ser Ala
 210 215

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 <212> PRT
 <213> Mus musculus

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 Gln Lys Lys Trp Leu Asn Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr 50 55 60
 Tyr Cys Asp Leu Ser Val Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr 65 70 75 80

Ala Lys Val Lys Ala Ile Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu
85 90 95
Thr Glu Arg Phe Tyr Pro Phe Leu Glu Thr Gln Val Ser Pro Pro Glu
100 105 110
Ile Ala Leu Thr Thr Gly Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala
115 120 125
Pro Glu Lys Trp Lys Arg Asn Pro Gln Asp His Thr Val Ser Met Gln
130 135 140
Gln Ile Tyr Pro Asn Leu Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys
145 150 155 160
Ser Arg Arg Thr Trp Ser Gln Cys Val Thr Asn Ser Thr Leu Val Leu
165 170 175
Ser Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Leu
180 185 190
Val Pro Gly Pro Pro Arg Leu Pro Met Pro Ser Gln Lys Gln Cys Ile
195 200 205
Ser Thr Leu Glu Val Gln Thr Ser Ala Trp Lys Ala Lys Val Ile Phe
210 215 220
Trp Tyr Val Phe Leu Thr Ser Val Ile Val Phe Leu Phe Ser Ala Ile
225 230 235 240
Gly Tyr Leu Val Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro
245 250 255
Ala Asn Leu Val Leu Ile Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe
260 265 270
Glu Pro Thr Glu Thr Ile Thr Leu Asn Phe Ile Thr Phe Ser Met Leu
275 280 285
Asp Asp Thr Lys Ile Ser Pro Lys Asp Met Asn Leu Leu Asp Lys Ser
290 295 300
Ser Asp Asp Ile Ser Val Asn Asp Pro Glu His Asn Glu Ala Trp Glu
305 310 315 320
Pro His Trp Glu Glu Val Glu Gly Gln His Leu Gly Cys Ser Ser His
325 330 335
Leu Met Asp Ala Val Cys Gly Ala Glu Gln Arg Asp Gly Asp Thr Ser
340 345 350
Leu Thr Gln His Gly Trp Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr
355 360 365
Asp Thr Glu Pro Gln Tyr Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly
370 375 380
Glu Ile Gln Leu Ser Cys Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys
385 390 395 400
Ile Ser Glu Pro Leu Val Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu
405 410 415

Asp Leu His His Leu Gly Gln Glu His Thr Val Ser Glu Asp Gly Pro
420 425 430
Glu Glu Glu Thr Ser Ile Thr Val Val Asp Trp Asp Pro Pro Gln Thr Gly
435 440 445
Arg Leu Cys Ile Pro Ser Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn
450 455 460
Tyr Gly His Tyr Glu Arg Asp Gln Leu Leu Glu Gly Gly Leu Leu Ser
465 470 475 480
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485 490 495
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Glu Ser

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<400> 40
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<210> 41
<211> 24
<212> DNA
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<400> 41
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<210> 42
<211> 36
<212> DNA
<213> Homo sapiens

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acttgtggaa ttgcgttagca ccaaggcccc atcggt 36

<210> 43
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<212> DNA
<213> Homo sapiens

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aattgaga		8
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gtcacttcaa ttccgttaccg cctctgttgt gtgcctg		37
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<210> 48		
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<211> 86				
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gccacagtgg cctcccttg cacctc				86
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Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Leu Leu Leu				
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ctg gcg gcg cct tgg gga cggtt ccc tgt gtc tct ggt ggt ttg				96
Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val Ser Gly Gly Leu				
20	25	30		

cct aaa cct gca aac atc acc ttc tta tcc atc aac atg aag aat gtc Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val 35 40 45	144
cta caa tgg act cca cca gag ggt ctt caa gga gtt aaa gtt act tac Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr 50 55 60	192
act gtg cag tat ttc ata tat ggg caa aag aaa tgg ctg aat aaa tca Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser 65 70 75 80	240
gaa tgc aga aat atc aat aga acc tac tgt gat ctt tct gct gaa act Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr 85 90 95	288
tct gac tac gaa cac cag tat tat gcc aaa gtt aag gcc att tgg gga Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly 100 105 110	336
aca aag tgt tcc aaa tgg gct gaa agt gga cgg ttc tat cct ttt tta Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu 115 120 125	384
gaa aca caa att ggc cca cca gag gtg gca ctg act aca gat gag aag Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys 130 135 140	432
tcc att tct gtt gtc ctg aca gct cca gag aag tgg aag aga aat cca Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro 145 150 155 160	480
gaa gac ctt cct gtt tcc atg caa caa ata tac tcc aat ctg aag tat Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr 165 170 175	528
aac gtg tct gtg ttg aat act aaa tca aac aga acg tgg tcc cag tgt Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys 180 185 190	576
gtg acc aac cac acg ctg gtg ctc acc tgg ctg gag ccg aac act ctt Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu 195 200 205	624

tac tgc gta cac gtg gag tcc ttc gtc cca ggg ccc cct cgc cgt gct		672	
Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala			
210	215	220	
cag cct tct gag aag cag tgt gcc agg act ttg aaa gat caa tca tca		720	
Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser			
225	230	235	240
gag gct agc acc aag ggc cca tcg gtc ttc ccc ctg gca ccc tcc tcc		768	
Glu Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser			
245	250	255	
aag agc acc tct ggg ggc aca gcg gcc ctg ggc tgc ctg gtc aag gac		816	
Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp			
260	265	270	
tac ttc ccc gaa ccg gtg acg gtg tcg tgg aac tca ggc gcc ctg acc		864	
Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr			
275	280	285	
agc ggc gtg cac acc ttc ccg gct gtc cta cag tcc tca gga ctc tac		912	
Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr			
290	295	300	
tcc ctc agc agc gtg gtg acc gtg ccc tcc agc agc ttg ggc acc cag		960	
Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Leu Gly Thr Gln			
305	310	315	320
acc tac atc tgc aac gtg aat cac aag ccc agc aac acc aag gtg gac		1008	
Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp			
325	330	335	
aag aaa gtt gag ccc aaa tct tgt gac aaa act cac aca tgc cca ccg		1056	
Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro			
340	345	350	
tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc		1104	
Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro			
355	360	365	
cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca		1152	

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr				
370	375	380		
tgc gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac				1200
Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn				
385	390	395	400	
tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg cg				1248
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg				
405	410	415		
gag gag cag tac aac agc acg tac cgt gtg gtc agc gtc ctc acc gtc				1296
Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val				
420	425	430		
ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc				1344
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser				
435	440	445		
aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa				1392
Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys				
450	455	460		
ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cg gat				1440
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp				
465	470	475	480	
gag ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc				1488
Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe				
485	490	495		
tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg gag				1536
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu				
500	505	510		
aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc				1584
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe				
515	520	525		
ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag cag ggg				1632
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly				
530	535	540		

aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac				1680
Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr				
545	550	555	560	
acg cag aag agc ctc tcc ctg tct ccg ggt aaa tgacgcg				1720
Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys				
565	570			
<210> 53				
<211> 571				
<212> PRT				
<213> Homo sapiens				
<400> 53				
Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Leu Leu Leu				
1	5	10	15	
Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val Ser Gly Gly Leu				
20	25	30		
Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val				
35	40	45		
Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr				
50	55	60		
Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser				
65	70	75	80	
Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr				
85	90	95		
Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly				
100	105	110		
Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu				
115	120	125		
Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys				
130	135	140		
Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro				
145	150	155	160	
Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr				
165	170	175		
Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys				
180	185	190		
Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu				
195	200	205		
Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala				
210	215	220		

Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser
225 230 235 240
Glu Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
245 250 255
Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
260 265 270
Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
275 280 285
Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
290 295 300
Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
305 310 315 320
Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
325 330 335
Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
340 345 350
Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
355 360 365
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
370 375 380
Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
385 390 395 400
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
405 410 415
Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
420 425 430
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
435 440 445
Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
450 455 460
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
465 470 475 480
Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
485 490 495
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
500 505 510
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
515 520 525
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
530 535 540
Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
545 550 555 560

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 565 570

<210> 54
 <211> 547
 <212> PRT
 <213> Homo sapiens

<400> 54

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15

Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30

Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45

Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60

Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80

Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95

Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110

Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125

Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140

Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160

Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175

Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190

Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205

Arg Thr Leu Lys Asp Gln Ser Ser Glu Ala Ser Thr Lys Gly Pro Ser
 210 215 220

Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
 225 230 235 240

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
 245 250 255

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
 260 265 270

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
275 280 285
Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
290 295 300
Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
305 310 315 320
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
325 330 335
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
340 345 350
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
355 360 365
Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
370 375 380
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
385 390 395 400
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
405 410 415
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
420 425 430
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
435 440 445
Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
450 455 460
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
465 470 475 480
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
485 490 495
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
500 505 510
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
515 520 525
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
530 535 540
Pro Gly Lys
545

<210> 55
<211> 217
<212> PRT
<213> Homo sapiens

<400> 55

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15
 Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Ser Ser Glu
 210 215

<210> 56
 <211> 1011
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(1008)

<400> 56

atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca agt ctt ttc
 Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15

atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca gat gaa gtg Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val	20	25	30	96
gcc att ctg cct gcc cct cag aac ctc tct gta ctc tca acc aac atg Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met	35	40	45	144
aag cat ctc ttg atg tgg agc cca gtg atc gcg cct gga gaa aca gtg Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val	50	55	60	192
tac tat tct gtc gaa tac cag ggg gag tac gag agc ctg tac acg agc Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser	65	70	75	240
cac atc tgg atc ccc agc agc tgg tgc tca ctc act gaa ggt cct gag His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu	85	90	95	288
tgt gat gtc act gat gac atc acg gcc act gtg cca tac aac ctt cgt Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg	100	105	110	336
gtc agg gcc aca ttg ggc tca cag acc tca gcc tgg agc atc ctg aag Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys	115	120	125	384
cat ccc ttt aat aga aac tca acc atc ctt acc cga cct ggg atg gag His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu	130	135	140	432
atc acc aaa gat ggc ttc cac ctg gtt att gag ctg gag gac ctg ggg Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly	145	150	155	480
ccc cag ttt gag ttc ctt gtg gcc tac tgg agg agg gag cct ggt gcc Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala	165	170	175	528
gag gaa cat gtc aaa atg gtg agg agt ggg ggt att cca gtg cac cta Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu	180	185	190	576

gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag aca ttc Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe 195 200 205	624
gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa tgt gtg Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val 210 215 220	672
gag gtg caa gga gag gcc act gtg gct gca cca tct gtc ttc atc ttc Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val Phe Ile Phe 225 230 235 240	720
ccg cca tct gat gag cag ttg aaa tct ggt acc gcc tct gtt gtg tgc Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys 245 250 255	768
ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val 260 265 270	816
gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln 275 280 285	864
gac agc aag gac agc acc tac agc ctc agc agc acc ctg acg ctg agc Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser .290 295 300	912
aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His 305 310 315 320	960
cag ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys 325 330 335	1008
tag	1011
<210> 57	
<211> 336	
<212> PRT	
<213> Homo sapiens	

<400> 57

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
1 5 10 15
Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
20 25 30
Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
35 40 45
Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
50 55 60
Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
65 70 75 80
His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
85 90 95
Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
100 105 110
Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
115 120 125
His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
130 135 140
Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
145 150 155 160
Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala
165 170 175
Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
180 185 190
Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
195 200 205
Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
210 215 220
Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val Phe Ile Phe
225 230 235 240
Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
245 250 255
Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
260 265 270
Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
275 280 285
Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
290 295 300
Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
305 310 315 320

Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys
325															335
<210> 58															
<211> 307															
<212> PRT															
<213> Homo sapiens															
<400> 58															
Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
1		5							10					15	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly
		20						25					30		
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu
		35					40				45				
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu
		50				55				60					
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr
		65			70				75					80	
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser
				85				90					95		
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro
				100				105				110			
Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu
		115				120						125			
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu
		130			135					140					
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro
		145			150			155					160		
Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala
				165				170					175		
Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr
				180			185					190			
Glu	Cys	Val	Glu	Val	Gln	Gly	Glu	Ala	Thr	Val	Ala	Ala	Pro	Ser	Val
		195			200						205				
Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser
		210			215					220					
Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln
		225			230				235				240		
Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val
				245			250					255			
Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu
		260			265						270				

Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
275 280 285
Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
290 295 300
Gly Glu Cys
305

<210> 59
<211> 201
<212> PRT
<213> Homo sapiens

<400> 59
Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
1 5 10 15
Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
20 25 30
Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
35 40 45
Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
50 55 60
Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
65 70 75 80
Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
85 90 95
Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
100 105 110
Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu
115 120 125
Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu
130 135 140
Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
145 150 155 160
Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
165 170 175
Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
180 185 190
Glu Cys Val Glu Val Gln Gly Glu Ala
195 200

<210> 60
<211> 323
<212> PRT

<213> Homo sapiens

<400> 60
Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
1 5 10 15
Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
20 25 30
Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
35 40 45
Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
50 55 60
Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
65 70 75 80
Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
85 90 95
Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
100 105 110
Gly Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu
115 120 125
Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu
130 135 140
Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
145 150 155 160
Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
165 170 175
Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
180 185 190
Glu Cys Val Glu Val Gln Gly Glu Ala Gly Gly Gly Ser Gly Gly
195 200 205
Gly Gly Ser Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val
210 215 220
Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser
225 230 235 240
Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln
245 250 255
Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val
260 265 270
Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu
275 280 285
Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
290 295 300
Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
305 310 315 320

Gly Glu Cys

<210> 61
<211> 201
<212> PRT
<213> Homo sapiens

<400> 61

Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
1				5					10						15
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly
		20						25						30	
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu
		35				40					45				
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu
		50				55				60					
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr
	65				70				75					80	
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	Thr	Ser	Ala	Trp	Ser
		85				90					95				
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro
		100				105					110				
Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu
		115				120				125					
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Thr	Arg	Glu
		130			135				140						
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro
	145				150			155					160		
Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala
		165				170				175					
Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr
		180				185				190					
Glu	Cys	Val	Glu	Val	Gln	Gly	Glu	Ala							
		195			200										

<210> 62
<211> 559
<212> PRT
<213> Homo sapiens

<400> 62

Val	Pro	Cys	Val	Ser	Gly	Gly	Leu	Pro	Lys	Pro	Ala	Asn	Ile	Thr	Phe
1				5					10					15	

Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
20 25 30
Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
35 40 45
Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
50 55 60
Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
65 70 75 80
Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
85 90 95
Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
100 105 110
Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
115 120 125
Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
130 135 140
Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
145 150 155 160
Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
165 170 175
Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
180 185 190
Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
195 200 205
Arg Thr Leu Lys Asp Gln Gly Gly Gly Ser Gly Gly Gly Ser
210 215 220
Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
225 230 235 240
Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
245 250 255
Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
260 265 270
Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
275 280 285
Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
290 295 300
Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
305 310 315 320
Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
325 330 335
Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro Ser Val
340 345 350

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
355 360 365
Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
370 375 380
Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
385 390 395 400
Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
405 410 415
Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
420 425 430
Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu Lys Thr Ile
435 440 445
Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
450 455 460
Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
465 470 475 480
Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
485 490 495
Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
500 505 510
Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
515 520 525
Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
530 535 540
His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
545 550 555

<210> 63
<211> 214
<212> PRT
<213> Homo sapiens

<400> 63
Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
1 5 10 15
Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
20 25 30
Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
35 40 45
Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
50 55 60
Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
65 70 75 80

Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
85 90 95
Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
100 105 110
Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
115 120 125
Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
130 135 140
Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
145 150 155 160
Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
165 170 175
Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
180 185 190
Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
195 200 205
Arg Thr Leu Lys Asp Gln
210

<210> 64
<211> 19
<212> PRT
<213> Homo sapiens

<400> 64
Glu Glu Ile His Ala Glu Leu Arg Arg Phe Arg Arg Val Pro Cys Val
1 5 10 15
Ser Gly Gly

<210> 65
<211> 207
<212> PRT
<213> Homo sapiens

<400> 65
Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn
1 5 10 15
Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr
20 25 30
Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys
35 40 45
Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu
50 55 60

Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp
 65 70 75 80
 Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe
 85 90 95
 Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu
 100 105 110
 Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn
 115 120 125
 Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys
 130 135 140
 Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln
 145 150 155 160
 Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr
 165 170 175
 Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg
 180 185 190
 Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln
 195 200 205

<210> 66

<211> 150

<212> PRT

<213> Homo sapiens

<400> 66

Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser
 1 5 10 15
 Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr
 20 25 30
 Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu
 35 40 45
 Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser
 50 55 60
 Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu
 65 70 75 80
 Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn
 85 90 95
 Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val
 100 105 110
 Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr
 115 120 125
 Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln
 130 135 140

Pro Ser Glu Lys Gln Cys
145 150

<210> 67
<211> 196
<212> PRT
<213> Homo sapiens

<400> 67
Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met Lys His
1 5 10 15
Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val Tyr Tyr
20 25 30
Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser His Ile
35 40 45
Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp
50 55 60
Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg Val Arg
65 70 75 80
Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys His Pro
85 90 95
Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr
100 105 110
Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln
115 120 125
Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu
130 135 140
His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr
145 150 155 160
Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
165 170 175
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu Val
180 185 190
Gln Gly Glu Ala
195

<210> 68
<211> 203
<212> PRT
<213> Homo sapiens

<400> 68

Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1 5 10 15
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu
 130 135 140
 Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
 145 150 155 160
 Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
 165 170 175
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 180 185 190
 Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro
 195 200

<210> 69
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 69
 Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met Lys His
 1 5 10 15
 Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val Tyr Tyr
 20 25 30
 Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser His Ile
 35 40 45
 Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp
 50 55 60
 Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg Val Arg
 65 70 75 80

Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys His Pro
85 90 95
Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Pro
100 105 110
Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln
115 120 125
Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala Glu Glu
130 135 140
His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr
145 150 155 160
Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
165 170 175
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu Val
180 185 190
Gln Gly Glu Ala
195

<210> 70
<211> 135
<212> PRT
<213> Homo sapiens

<400> 70
Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr
1 5 10 15
Ala Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
20 25 30
Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr
35 40 45
Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu
50 55 60
Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala
65 70 75 80
Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg
85 90 95
Ser Gly Gly Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala
100 105 110
Tyr Cys Val Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser
115 120 125
Ala Phe Ser Gln Thr Glu Cys
130 135

<210> 71

<211> 135
<212> PRT
<213> Homo sapiens

<400> 71

Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr
1 5 10 15
Ala Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
20 25 30
Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr
35 40 45
Ile Leu Thr Arg Pro Gly Met Glu Ile Pro Lys His Gly Phe His Leu
50 55 60
Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala
65 70 75 80
Tyr Trp Thr Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg
85 90 95
Ser Gly Gly Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala
100 105 110
Tyr Cys Val Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser
115 120 125
Ala Phe Ser Gln Thr Glu Cys
130 135

<210> 72
<211> 15
<212> PRT
<213> Homo sapiens

<400> 72

Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15